

April 4, 2019

U.S. Environmental Protection Agency Region 1: New England Office of Ecosystem Protection Water Technical Unit (OES04 – SMR) 5 Post Office Square - Suite 100 Boston, MA 02109-3912

Dear Sir/Madam:

#### Merrimack Station NPDES Permit No. NH0001465 2018 Annual Fish Impingement Report

Granite Shore Power LLC (GSP) herein submits this Annual Fish Impingement Report for the year 2018 pursuant to Part I., Section A.10.b. of the Merrimack Station NPDES Permit, No. NH0001465. This permit condition requires GSP to conduct impingement monitoring at Merrimack Station according to the provisions below.

- GSP shall provide impingement monitoring at Merrimack Station when flows from Garvins Falls Hydroelectric Station are less than 900 cubic feet per second (cfs) during any period from July 1 through October 15.
- GSP shall collect all fish from both MK-1 and MK-2 traveling screen washes during one continuous 48-hour period per week when the conditions outlined above are met.
- GSP shall report in writing to the New Hampshire Fish & Game Department (NHFGD), United States Fish
  and Wildlife Service (USFWS), New Hampshire Department of Environmental Services (NHDES) and the
  United States Environmental Protection Agency (USEPA) any Extraordinary Impingement Event (EIE) at
  Merrimack Station. An EIE is defined as an event when 50 or more fish at any one time, of any size or
  species, are either distressed or killed as a result of impingement.

Weekly sampling logs are attached which show that no impingement samples were collected in 2018 because the river flow was greater than 900 cfs at all times that Merrimack Station was withdrawing water to run the generating units. There were no extraordinary impingement events in 2018.

If you have any questions regarding this report, please call Allan Palmer at (603) 230-7951.

Sincerely,

GRANITE SHORE POWER

Elizabeth H. Tillotson

Executive Director of Administration & Regulatory Affairs

cc: Ms. Sharon M. DeMeo

US Environmental Protection Agency

Region 1: New England

Office of Ecosystem Protection

Mail Code: OEP

5 Post Office Square - Suite 100

Boston, MA 02109-3912

Mr. Eric Nelson

US Environmental Protection Agency

Region 1: New England

Office of Ecosystem Protection

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Boston, MA 02109-3912

NH Department of Environmental Services

Water Division

Wastewater Engineering Bureau

Permits and Compliance Section

29 Hazen Drive, P.O. Box 95

Concord, NH 03302-0095

Mr. Joseph F. McKeon

US Fish and Wildlife Service

Central New England Fishery Resources Office

151 Broad Street

Nashua, NH 03063

Mr. John Magee, Fish Habitat Biologist

New Hampshire Fish and Game Department

Inland Fisheries Division

11 Hazen Drive

Concord, NH 03301

Ms. Carol Henderson, Environmental Review Coordinator

New Hampshire Fish and Game Department

11 Hazen Drive

Concord, NH 03301





# MERRIMACK STATION FISH IMPINGEMENT MONITORING REPORT

JULY 1 TO OCTOBER 15 2018

MERRIMACK STATION

Week Ending 7 7 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
PERIOD	<> 900 cfs	On/Off	On/Off
Begin	>900 cfs	MK-1 ON MK-2 ON	MK-1 A+B

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Alewife		$\rightarrow$	 $\longrightarrow$											 	-	-
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Small mouth Bass																$\vdash$
Largemouth Bass								_				_			-	_
Bluegill Sunfish																
Pumpkinseed Sunfish																L
Redbrested Sunfish																L
Brown Bullhead									L							L
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MERRIMACK STATION

Week Ending 7 14 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
PERIOD	<> 900 cfs	On/Off	On/Off
Begin	~	MK-1 Off MK-2 Off	MK-1 Off MK-2 Off

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American Shad											+	_					
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MERRIMACK STATION

Week Ending 7 21 18

	SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
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MERRIMACK STATION

Week Ending 7 28 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
PERIOD	< > 900 cfs	On/Off	On/Off
Begin		MK-1 Off MK-2 Off	MK-1 OFF MK-2 OFF

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American Shad												
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Yellow Perch												
Common Shiner												
Spottail Shiner												
American eel												
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**PUMP STATUS** 

On/Off

MK-1

MK-2

# FISH IMPINGEMENT MONITORING WEEKLY DATA SHEET

MERRIMACK STATION

Week Ending 84 18

SAMPLING PERIOD RIVER FLOW UNIT STATUS

On/Off
Begin End
MK-1 Off
MK-2 Off

Alewife American Shad Small mouth Bass Largemouth Bass Bluegill Sunfish Pumpkinseed Sunfish Redbrested Sunfish Brown Bullhead White Sucker Yellow Perch Common Shiner Spottail Shiner American eel														
American Shad Small mouth Bass Largemouth Bass Bluegill Sunfish Pumpkinseed Sunfish Redbrested Sunfish Brown Bullhead White Sucker Yellow Perch Common Shiner Spottail Shiner American eel														
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MERRIMACK STATION

Week Ending 8/11/18

SAMPLING PERIOD Begin End RIVER FLOW
<> 900 cfs

UNIT STATUS On/Off PUMP STATUS On/Off

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American Shad										7						H	-	╁
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MERRIMACK STATION

Week Ending 8 18 18

SAMPLING PERIOD Begin End RIVER FLOW
> 900 cfs
> 900 cfs

UNIT STATUS

On/Off MK-1

**PUMP STATUS** 

MK-1 OH MK-1 — MK-2 ON MK-2 A&B

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American Shad															
Small mouth Bass															
Largemouth Bass															
Bluegill Sunfish															
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MERRIMACK STATION

Week Ending 8/25 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
PERIOD	<> 900 cfs	On/Off	On/Off
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MERRIMACK STATION

Week Ending 9/1/18

SAMPLING PERIOD Begin End RIVER FLOW <> 900 cfs UNIT STATUS On/Off PUMP STATUS On/Off

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MERRIMACK STATION

Week Ending

SAMPLING **PERIOD** Begin End

**RIVER FLOW** < > 900 cfs

>900cfs

**UNIT STATUS** On/Off

**PUMP STATUS** On/Off

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MK-1 MK-2

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MERRIMACK STATION

Week Ending 9 15 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
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MERRIMACK STATION

Week Ending 9 22 18

SAMPLING	RIVER FLOW < > 900 cfs	UNIT STATUS	PUMP STATUS
PERIOD		On/Off	On/Off
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MERRIMACK STATION

Week Ending 9/29/18

SAMPLING PERIOD Begin End RIVER FLOW <> 900 cfs UNIT STATUS
On/Off

MK-1

MK-2

Off

On/Off

MK-1 Off

MK-2 Off

**PUMP STATUS** 

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Alewife	-	-	-																	
American Shad		-	+		-															
Small mouth Bass		-		-					$\rightarrow$											
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MERRIMACK STATION

Week Ending 10 6 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS
PERIOD	<> 900 cfs	On/Off	On/Off
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MERRIMACK STATION

Week Ending 10 13 18

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS			
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MERRIMACK STATION

Week Ending 10 15 18 \*

SAMPLING	RIVER FLOW	UNIT STATUS	PUMP STATUS			
PERIOD	<> 900 cfs	On/Off				
Begin End		MK-1 OFF MK-2 OFF	MK-1 Off MK-2 Off			

\* End of monitoring period. Alewife American Shad Small mouth Bass Largemouth Bass Bluegill Sunfish Pumpkinseed Sunfish Redbrested Sunfish Brown Bullhead White Sucker Yellow Perch Common Shiner Spottail Shiner American eel